AL.h718

CANADIANA

MAY - 8 1984

# 1983 ALBERTA HOUSE COST COMPARISON STUDY

Executive Summary

## Single Detached Dwelling

## 24 Unit Walk-up Apartment

Alberta
DEPARTMENT OF HOUSING

# 1983 ALBERTA HOUSE COST COMPARISON STUDY

## EXECUTIVE SUMMARY

NOVEMBER 1983

Prepared by:

Hanscomb Consultants Inc.
205, One Thornton Court
Edmonton, Alberta
T5J 2E7

Prepared for:

ALBERTA DEPARTMENT OF HOUSING
Planning and Research Branch
10050 - 112 Street
Edmonton, Alberta
T5K 2J1

ISSN 0822-3920

TABLE OF CONTENTS


Page No.

PREFACE ..... 1

1.0 INTRODUCTION ..... 2
1.1 Objectives ..... 3
1.2 Scope of Work ..... 3
1.3 Approach ..... 5
1.4 Findings ..... 6

2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING ..... 9
SD.1 Total Building Costs ..... 10
SD.2 Comparative Cost Ratios ..... 11
SD.3 Comparative Cost Table 1982-1983 ..... 12
SD.4 Comparative Building Cost Bar Chart 1981-1983 ..... 13
SD.5 Comparative Total Building Costs 1979-1983 ..... 14
SD.6 Comparative Cost per Square Foot of Gross Floor Area ..... 15
SD.7 Comparative Total Building Cost Graphs 1979-1983 ..... 16
SD.8 Trade Division Cost Summaries ..... 17

3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT ..... 19
WA.1 Total Building Costs ..... 20
WA.2 Comparative Cost Ratios ..... 21
WA.3 Comparative Cost Tables 1982-1983 ..... 22
WA.4 Comparative Building Cost Bar Chart 1981-1983 ..... 23
WA.5 Comparative Total Building Costs 1980-1983 ..... 24
WA.6 Comparative Cost per Square Foot of Gross Floor Area ..... 25
WA.7 Comparative Cost per Apartment Unit ..... 26
WA.8 Comparative Total Building Cost Graphs 1980-1983 ..... 27
WA.9 Trade Division Cost Summaries ..... 28

APPENDIX

A) Reduced Drawings Single-Detached Dwelling
B) Reduced Drawings Walk-up Apartment
C) Changes from 1982 Study

## PREFACE

The main purpose of the 1983 Alberta House Cost Comparison Study is to provide cost estimates of the 1983 hard construction costs of a prototypical single-detached dwelling and a 24 unit walk-up apartment in eight urban centres in this Province.

The study also compares 1983 residential construction costs of the single-detached dwelling and the apartment with those of previous years in each of the eight urban centres. Most emphasis is given to a comparison of 1983 and 1982 costs and the study includes an analysis of these differences.

The Alberta Department of Housing has commissioned similar studies for the past six years. The 1983 study has been carried out by Hanscomb Consultants Inc. and has been documented in three reports:

1983 Alberta House Cost Comparison Study: Executive Summary
1983 Alberta House Cost Comparison Study: Single-Detached Dwelling
1983 Alberta House Cost Comparison Study: Walk-Up Apartment

Additional copies of any of these reports can be ordered from:

ALBERTA DEPARTMENT OF HOUSING
Planning and Research Branch
10050 - 112 Street
Edmonton, Alberta
T5K 2J1



Digitized by the Internet Archive
in 2015

https://archive.org/details/albertahousecost1983

# 1.0 INTRODUCTION

# 1.0 INTRODUCTION

## 1.1 Objectives

The objectives of the 1983 Alberta House Cost Comparison Study are as follows:

1. To determine 1983 residential construction costs in selected urban centers in Alberta.
2. To determine reasons for differences in residential construction costs in the selected centers.
3. To compare 1983 residential construction costs with those of previous years.

## 1.2 Scope of Work

The 1983 Alberta House Cost Comparison Study examines the construction costs of a typical single-detached dwelling and a twenty-four unit walk-up apartment building.

The study has been documented in three reports: an Executive Summary, a report on a typical single-detached dwelling and a report on a walk-up apartment. This report is the Executive Summary.

The study examines building construction costs in the following centers:

1. Edmonton
2. Calgary
3. Red Deer
4. Fort McMurray
5. Grande Prairie
6. Hinton
7. Lethbridge
8. Medicine Hat

# 1.0 INTRODUCTION

## 1.2 Scope of Work (cont'd)

The cost analysis for both the single detached dwelling and the walk-up apartment block examines the building construction cost differences between each of the centers and highlights the reasons for those differences with reference to such factors as:

a) material costs,
b) labour costs, and
c) building features and inclusions.

The cost estimates of the single-detached dwelling for each center includes all structural, finishing, mechanical and electrical work shown on the drawings and included in the specifications and site overhead. The estimate excludes the following items:

a) cost of land and site clearance,
b) site servicing costs,
c) site development costs,
d) design fees and expenses,
e) legal fees and expenses,
f) marketing and real estate financing costs, and
g) contractor's overhead and profit.

# 1.0 INTRODUCTION

## 1.2 Scope of Work (cont'd)

The cost estimates of the walk-up apartment block for each center includes all structural, finishing, mechanical and electrical work shown on the drawings and included in the specifications, site overhead and contractor's overhead and profit. The estimate excludes the following items:

a) cost of land and site clearance,
b) site servicing costs,
c) site development costs,
d) design fees and expenses,
e) legal fees and expenses, and
f) marketing and real estate financing costs.

## 1.3 Approach

The building construction costs are examined in the report under the headings of labour and material/equipment costs. Labour rates used in the report are either those established by the trade union concerned or by the market where trade union rates do not apply. In most cases, a realistic assessment of labour rates has been established by examining the circumstances of the particular sub-trade within the building industry. Material prices have been evaluated from building materials suppliers lists. Average discounts are applied in order to establish a realistic market price for the materials to contractors.

# 1.0 INTRODUCTION

## 1.3 Approach (cont'd)

The cost data is assembled in trade format and presented in 22 trade categories for the single-detached dwelling and 25 trade categories for the walk-up apartment. The sub-trade operations are combined within each trade category in order to reflect current estimating practice within the industry. Site overhead and general contractor's office overhead and profit are shown separately for the walk-up apartment to indicate the actual site costs.

A computer program was developed in order to collate and present the cost data which were assembled in the eight centers. The quantities and trade descriptions were initially established for the prototypical house and apartment block. The cost data applicable to the relevant quantities and trade descriptions for each center were then processed through the computer.

The cost effects of market forces and building industry conditions are addressed in the Findings section of the report.

## 1.4 Findings

Several factors have influenced the residential building market during 1983. The most significant factor influencing the present market condition has been the downturn in the economy, which has curtailed the number of people immigrating to the Province and reduced construction activity in residential as well as institutional and commercial sectors.

# 1.0 INTRODUCTION

## 1.4 Findings (cont'd)

Cost comparisons between 1983 and 1982 indicate the continuing reduction in labour and material costs from 1982. The decrease in labour costs is thought to be mainly due to the surplus supply of labour and the material cost has decreased due to high discount rates offered by suppliers and manufacturers to reduce their inventories.

In all centers surveyed for this study, residential construction costs have generally decreased significantly in 1983 except for Grande Prairie, where only a marginal decrease occurred. Material prices show a slightly smaller decrease than labour prices in all centers except Grande Prairie, where they have remained at the 1982 level. Single-detached dwelling cost decreases varied from a marginal decrease of 0.9% in Grande Prairie to 8.6% in Red Deer. Cost trends for the walk-up apartment indicate a more substantial reduction since 1982 with decreases ranging from 4.4% to 12.2%.

The graphic presentation of construction costs in Tables SD.7 (Comparative Total Building Cost Graphs 1979-1983 for the single-detached dwelling) and WA.8 (Comparative Total Building Cost Graphs 1980-1983 for the walk-up apartment) highlight the downward trend of construction costs. Measured in nominal dollars, apartment costs have dropped substantially to levels below 1980 costs, and single-detached dwelling costs are close to 1980 costs.

# 1.0 INTRODUCTION

## 1.4 Findings (cont'd)

The average cost per square foot for the single-detached dwelling is $35.83, which is lower than the 1980 average of $ 36.22 by 1%. The average cost per square foot for the walk-up apartment is $32.24, which is lower than the 1980 average of $35.48 by 9%.

In the past appliances have been included in the cost of single-detached dwellings but they are currently included in only 10 to 20% of the new homes. To facilitate comparison with 1982 costs, the 1983 single-detached dwelling costs include an allowance for appliances. An amount of $945.00 has been allowed for a range and a refrigerator which amounts to $9.45/$m^2$ or $0.88/square foot.

# 2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

## 2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.1: Total Building Costs

| Item | Edmonton | | Calgary | | Red Deer | | Fort McMurray | | Grande Prairie | | Hinton | | Lethbridge | | Medicine Hat | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Element | Total $ | % | Total $ | % | Total $ | % | Total $ | % | Total $ | % | Total $ | % | Total $ | % | Total $ | % |
| Labour | 9,812 | 27.5 | 9,559 | 27.4 | 10,290 | 27.9 | 12,528 | 29.1 | 10,750 | 26.6 | 11,557 | 29.1 | 11,177 | 29.1 | 11,907 | 30.3 |
| Material* | 25,911 | 72.5 | 25,394 | 72.6 | 26,651 | 72.1 | 30,493 | 70.9 | 29,699 | 73.4 | 28,119 | 70.9 | 27,250 | 70.9 | 27,419 | 69.7 |
| Total 1983* | 35,723 | 100 | 34,953 | 100 | 36,941 | 100 | 43,021 | 100 | 40,449 | 100 | 39.676 | 100 | 38,427 | 100 | 39,326 | 100 |
| Cost per m2 | $ 357.23 | | $ 349.53 | | $ 369.41 | | $ 430.21 | | $ 404.49 | | $ 396.76 | | $ 384.27 | | $ 393.26 | |
| Cost per SF | $ 33.19 | | $ 32.47 | | $ 34.32 | | $ 39.97 | | $ 37.58 | | $ 36.86 | | $ 35.70 | | $ 36.53 | |
| Total 1982 | $ 37,732 | | $ 36,894 | | $ 40,432 | | $ 46,257 | | $ 40,814 | | $ 42,453 | | $ 41,546 | | $ 42,102 | |
| Change from 1982 | - 5.3% | | - 5.3% | | - 8.6% | | - 7.0% | | - 0.9% | | - 6.5% | | - 7.5% | | - 6.6% | |

NOTES: *Materials cost includes $945.00 ($9.45/m2 $0.88/SF) for appliances (fridge and stove).

## 2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.2: Comparative Cost Ratios

| Location | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|
| Edmonton | 1.00 | 0.98 | 1.03 | 1.20 | 1.13 | 1.11 | 1.08 | 1.10 |
| Calgary | 1.02 | 1.00 | 1.06 | 1.23 | 1.16 | 1.14 | 1.10 | 1.13 |
| Red Deer | 0.97 | 0.95 | 1.00 | 1.16 | 1.09 | 1.07 | 1.04 | 1.06 |
| Fort McMurray | 0.83 | 0.81 | 0.86 | 1.00 | 0.94 | 0.92 | 0.89 | 0.91 |
| Grande Prairie | 0.88 | 0.86 | 0.91 | 1.06 | 1.00 | 0.98 | 0.95 | 0.97 |
| Hinton | 0.90 | 0.88 | 0.93 | 1.08 | 1.02 | 1.00 | 0.97 | 0.99 |
| Lethbridge | 0.93 | 0.91 | 0.96 | 1.12 | 1.05 | 1.03 | 1.00 | 1.02 |
| Medicine Hat | 0.91 | 0.89 | 0.94 | 1.09 | 1.03 | 1.01 | 0.98 | 1.00 |

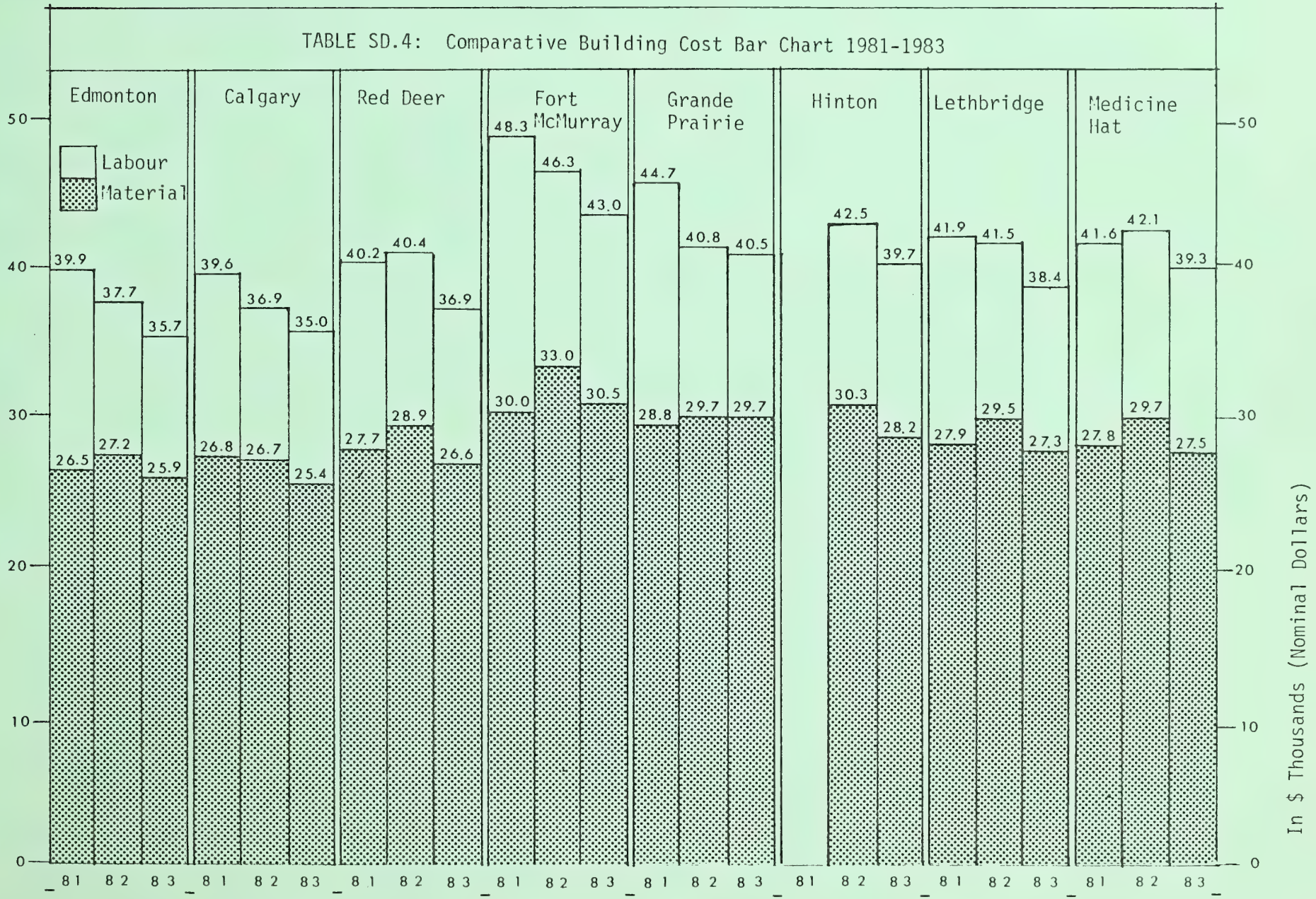
## 2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.3: Comparative Cost Table 1982-1983

| Item | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|
| Labour Cost | | | | | | | | |
| 1983 | $ 9,812 | $ 9,559 | $ 10,290 | $ 12,528 | $ 10,750 | $ 11,557 | $ 11,177 | $ 11,907 |
| 1982 | $ 10,536 | $ 10,331 | $ 11,475 | $ 13,232 | $ 11,084 | $ 12,152 | $ 12,053 | $ 12,401 |
| Difference | $ - 724 | $ - 772 | $ - 1,185 | $ - 704 | $ - 334 | $ - 595 | $ - 876 | $ - 494 |
| % Difference | - 6.8% | - 7.5% | - 10.3% | - 5.3% | - 3.0% | - 4.9% | - 7.3% | - 4.0% |
| Materials Cost | | | | | | | | |
| 1983* | $ 25.911 | $ 25,394 | $ 26,651 | $ 30,493 | $ 29,699 | $ 28,119 | $ 27,250 | $ 27,419 |
| 1982* | $ 27,196 | $ 26,563 | $ 28,957 | $ 33,025 | $ 29,730 | $ 30,301 | $ 29,493 | $ 29,701 |
| Difference | $ - 1,285 | $ - 1,169 | $ - 2,306 | $ - 2,532 | $ - 31 | $ - 2,182 | $ - 2,243 | $ - 2,282 |
| %Difference | $ - 4.7% | $ - 4.4% | - 8.0% | - 7.7% | - 0.1% | - 7.2% | - 7.6% | - 7.7% |
| Total Cost | | | | | | | | |
| 1983 | $ 35,723 | $ 34,953 | $ 36,941 | $ 43,021 | $ 40,449 | $ 39,676 | $ 38,427 | $ 39,326 |
| 1982 | $ 37,732 | $ 36,894 | $ 40,432 | $ 46,257 | $ 40,814 | $ 42,453 | $ 41,546 | $ 42,102 |
| Difference | $ - 2,009 | $ - 1,941 | $ - 3,491 | $ - 3,236 | $ - 365 | $ - 2,777 | $ - 3,119 | $ - 2,776 |
| Difference | - 5.3% | $ - 5.3% | - 8.6% | - 7.0% | - 0.9% | - 6.5% | - 7.5% | - 6.6% |

NOTES: *Materials cost includes $ 945.00 ($9.45/m2 or $0.88/SF) for appliances (fridge and stove).

## 2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING



## 2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.5: Comparative Total Building Costs 1979 - 1983*

| Year | Average 8 Centers | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton** | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|---|
| 1979 | $32,057 | $29,545 | $28,810 | $31,431 | $37,364 | $34,348 | - | $30,651 | $32,249 |
| 1980 | $38,991 | $36,239 | $34,964 | $37,206 | $45,747 | $42,143 | - | $38,055 | $38,586 |
| 1981 | $42,304 | $39,925 | $39,578 | $40,159 | $48,339 | $44,655 | - | $41,910 | $41,561 |
| 1982 | $41,029 | $37,732 | $36,894 | $40,432 | $46,257 | $40,814 | $42,453 | $41,546 | $42,102 |
| 1983*** | $38,565 | $35,723 | $34,953 | $36,941 | $43,021 | $40,449 | $39,676 | $38,427 | $39,326 |

NOTES: * Expressed in nominal dollars.
** Hinton was not included in the 1979, 1980 and 1981 studies.
***Materials cost includes $ 945.00 ($9.45/m2 or $0.88/SF) for appliances (fridge and stove).

## 2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

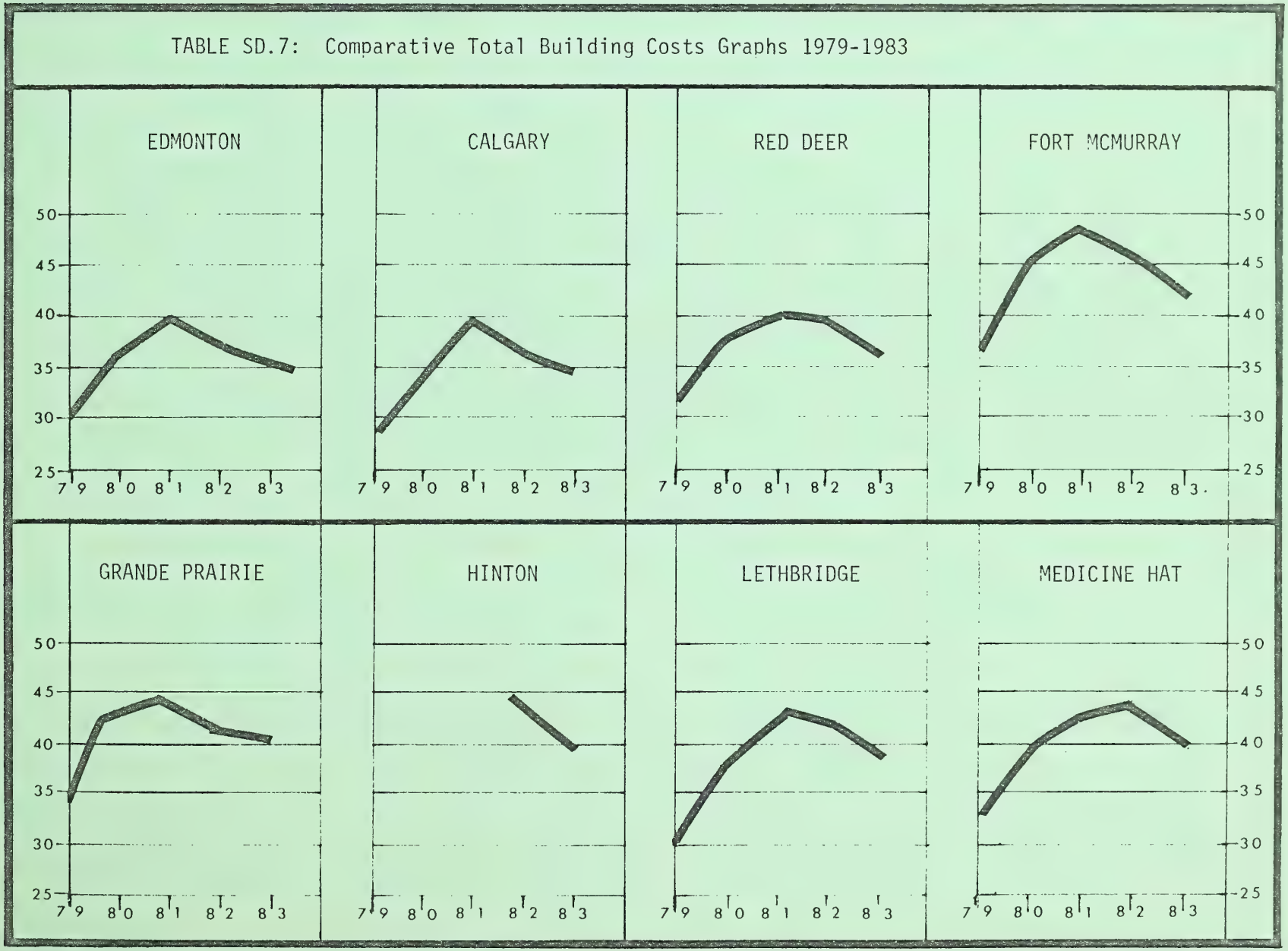
TABLE SD.6: Comparative Cost per Square Foot of Gross Floor Area*

| Year | Average 8 Centers | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton** | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|---|
| 1979 | $ 29.78 | $ 27.45 | $ 26.76 | $ 29.20 | $ 34.71 | $ 31.91 | - | $ 28.47 | $ 29.96 |
| 1980 | $ 36.22 | $ 33.66 | $ 32.48 | $ 34.56 | $ 42.50 | $ 39.15 | - | $ 35.35 | $ 35.85 |
| 1981 | $ 39.30 | $ 37.09 | $ 36.77 | $ 37.30 | $ 44.91 | $ 41.48 | - | $ 38.93 | $ 38.61 |
| 1982 | $ 38.10 | $ 35.05 | $ 34.27 | $ 37.56 | $ 42.97 | $ 37.82 | $ 39.44 | $ 38.60 | $ 39.11 |
| *** 1983 | $ 35.83 | $ 33.19 | $ 32.47 | $ 34.32 | $ 39.97 | $ 37.58 | $ 36.86 | $ 35.70 | $ 36.53 |

NOTES: * Expressed in nominal dollars.
** Hinton was not included in the 1979, 1980 and 1981 studies.
***Materials cost includes $ 945.00 ($9.45/m2 or $0.88/SF) for appliances (fridge and stove).

## 2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.7: Comparative Total Building Costs Graphs 1979-1983



## 3.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.8: Trade Division Cost Summaries

| Location | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|
| Divisions | | | | | | | | |
| 1. Excavation | 791 | 826 | 880 | 1,134 | 927 | 871 | 1,038 | 887 |
| 2. Concrete | 4,384 | 4,247 | 4,796 | 6,228 | 5,733 | 4,941 | 4,699 | 5,146 |
| 3. Damproofing | 267 | 263 | 350 | 372 | 372 | 286 | 320 | 320 |
| 4. Siding | 2,278 | 2,221 | 2,437 | 2,835 | 2,789 | 2,621 | 2,831 | 2,717 |
| 5. Roofing | 795 | 795 | 806 | 884 | 884 | 852 | 866 | 869 |
| 6. Carpentry - Rough | 6,112 | 6,162 | 5,897 | 7,418 | 6,664 | 6,406 | 6,554 | 6,833 |
| 7. Carpentry - Finish | 625 | 629 | 616 | 676 | 646 | 709 | 977 | 988 |
| 8. Windows and Glazing | 1,507 | 1,507 | 1,550 | 1,592 | 1,592 | 1,550 | 1,550 | 1,550 |
| 9. Sealants | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| 10. Doors | 944 | 868 | 944 | 1,076 | 1,076 | 1,064 | 974 | 921 |
| 11. Hardware | 167 | 167 | 167 | 167 | 167 | 167 | 167 | 167 |
| 12. Ceramic Tiling | 150 | 135 | 152 | 165 | 138 | 200 | 155 | 160 |
| SUB TOTAL | 18,075 | 17,875 | 18,650 | 22,602 | 21,043 | 19,722 | 20,186 | 20,613 |

## 3.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.8: Trade Division Cost Summaries (cont'd)

| Location | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|
| Divisions | | | | | | | | |
| 13. Wallboard | 3,333 | 3,127 | 3,486 | 4,385 | 3,976 | 3,753 | 3,532 | 3,706 |
| 14. Flooring | 1,469 | 1,437 | 1,537 | 1,614 | 1,558 | 1,546 | 1,614 | 1,614 |
| 15. Painting | 1,308 | 1,214 | 1,453 | 1,594 | 1,501 | 1,594 | 1,589 | 1,587 |
| 16. Fitting | 2,179 | 2,025 | 2,249 | 2,365 | 2,310 | 2,300 | 2,295 | 2,295 |
| 17. Specialties | 164 | 164 | 171 | 166 | 166 | 166 | 166 | 166 |
| 18. Appliances | 1,045 | 1,045 | 1,045 | 1,045 | 1,045 | 1,045 | 1,045 | 1,045 |
| 19. Plumbing | 2,250 | 2,100 | 2,200 | 2,450 | 2,350 | 2,550 | 2,100 | 2,100 |
| 20. Heating | 1,400 | 1,466 | 1,450 | 1,800 | 1,800 | 1,800 | 1,400 | 1,500 |
| 21. Electrical | 1,500 | 1,500 | 1,700 | 2,000 | 1,700 | 2,200 | 1,500 | 1,700 |
| 22. Site Overhead | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 |
| TOTAL | 35,723 | 34,953 | 36,941 | 43,021 | 40,449 | 39,676 | 38,427 | 39,326 |

# 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

## 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.1: Total Building Costs

| Item | Edmonton | | Calgary | | Red Deer | | Fort McMurray | | Grande Prairie | | Hinton | | Lethbridge | | Medicine Hat | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Element | Total $ | % | Total $ | % | Total $ | % | Total $ | % | Total $ | % | Total $ | % | Total $ | % | Total $ | % |
| Labour | 228,737 | 37.9 | 226,059 | 38.2 | 236,896 | 38.0 | 277,536 | 39.0 | 245,108 | 36.6 | 259,910 | 38.6 | 244,680 | 38.7 | 260,282 | 40.2 |
| Material | 374,309 | 62.1 | 366,115 | 61.8 | 386,956 | 62.0 | 434,726 | 61.0 | 424,466 | 63.4 | 414,136 | 61.4 | 388,192 | 61.3 | 387,563 | 59.8 |
| Total 1983 | 603,046 | 100 | 592,174 | 100 | 623,852 | 100 | 712,262 | 100 | 669,574 | 100 | 674.046 | 100 | 632,872 | 100 | 647,845 | 100 |
| Cost per m2 | $ 324.74 | | $ 318.89 | | $ 335.95 | | $ 383.56 | | $ 360.57 | | $ 362.98 | | $ 340.80 | | $ 348.87 | |
| Cost per SF | $ 30.17 | | $ 29.63 | | $ 31.21 | | $ 35.63 | | $ 33.50 | | $ 33.72 | | $ 31.66 | | $ 32.41 | |
| Total 1983 per Apt. | $ 25,127 | | $ 24,674 | | $ 25,994 | | $ 29,678 | | $ 27,899 | | $ 28,085 | | $ 26,370 | | $ 26,994 | |
| Total 1982 | $ 665,273 | | $ 627,844 | | $ 710,485 | | $ 805,134 | | $ 700,436 | | $ 744,686 | | $ 720,280 | | $ 723,716 | |
| Total 1982 per Apt. | $ 27,720 | | $ 26,160 | | $ 29,604 | | $ 33,547 | | $ 29,185 | | $ 31,029 | | $ 30,012 | | $ 30,155 | |
| Change from 1982 | -9.4% | | -5.7% | | -12.2% | | -11.5% | | -4.4% | | -9.5% | | -12.1% | | -10.5% | |

## 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.2: Comparative Cost Ratios

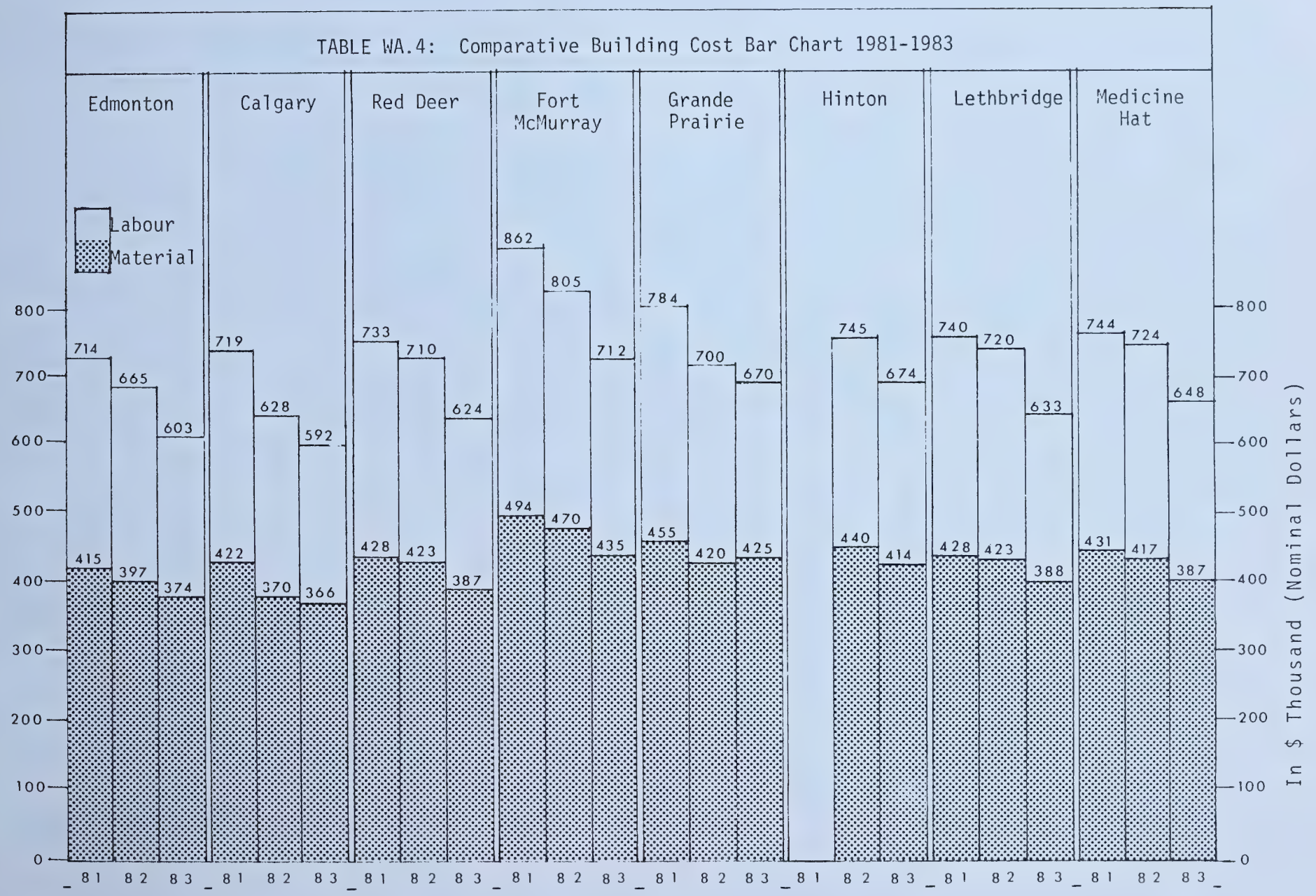
| Location | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|
| Edmonton | 1.00 | 0.98 | 1.03 | 1.18 | 1.11 | 1.12 | 1.05 | 1.07 |
| Calgary | 1.02 | 1.00 | 1.05 | 1.20 | 1.13 | 1.14 | 1.07 | 1.09 |
| Red Deer | 0.97 | 0.95 | 1.00 | 1.14 | 1.07 | 1.08 | 1.01 | 1.04 |
| Fort McMurray | 0.85 | 0.83 | 0.88 | 1.00 | 0.94 | 0.95 | 0.89 | 0.91 |
| Grande Prairie | 0.90 | 0.88 | 0.93 | 1.06 | 1.00 | 1.01 | 0.95 | 0.97 |
| Hinton | 0.89 | 0.88 | 0.93 | 1.06 | 0.99 | 1.00 | 0.94 | 0.96 |
| Lethbridge | 0.95 | 0.94 | 0.99 | 1.13 | 1.06 | 1.07 | 1.00 | 1.02 |
| Medicine Hat | 0.93 | 0.91 | 0.96 | 1.10 | 1.03 | 1.04 | 0.98 | 1.00 |

## 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.3: Comparative Cost Table 1982-1983

| Item | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|
| Labour | | | | | | | | |
| 1983 Cost | $ 228,737 | $ 226,059 | $ 236,896 | $ 277,536 | $ 245,108 | $ 259,910 | $ 244,680 | $ 260,282 |
| 1982 Cost | $ 268,142 | $ 257,490 | $ 287,271 | $ 335,453 | $ 280,570 | $ 304,687 | $ 297,684 | $ 306,440 |
| Difference | $ -39,405 | $ -31,431 | $ -50,375 | $ -57,917 | $ -35,462 | $ -44,777 | $ -53,004 | $ -46,158 |
| % Difference | - 14.7% | - 12.2% | - 17.5% | - 17.3% | - 12.6% | - 14.7% | - 17.8% | - 15.1% |
| Materials | | | | | | | | |
| 1983 Cost | $ 374,309 | $ 366,115 | $ 386,956 | $ 434,726 | $ 424,466 | $ 414,136 | $ 388,192 | $ 387,563 |
| 1982 Cost | $ 397,131 | $ 370,354 | $ 423,214 | $ 469,681 | $ 419,866 | $ 439,999 | $ 422,596 | $ 417,276 |
| Difference | $ -22,822 | $ - 4,239 | $ -36,258 | $ -34,955 | $ + 4,600 | $ -25,863 | $ -34,404 | $ -29,713 |
| %Difference | $ - 5.8% | $ - 1.1% | - 8.6% | - 7.4% | + 1.1% | - 5.9% | - 8.1% | - 7.1% |
| Total | | | | | | | | |
| 1983 Cost | $ 603,046 | $ 592,174 | $ 623,852 | $ 712,262 | $ 669,574 | $ 674,046 | $ 632,872 | $ 647,845 |
| 1982 Cost | $ 665,273 | $ 627,844 | $ 710,485 | $ 805,134 | $ 700,436 | $ 744,686 | $ 720,280 | $ 723,716 |
| Difference | $ -62,227 | $ -35,670 | $ -86,633 | $ -92,872 | $ -30,862 | $ -70,640 | $ -87,408 | $ -75,871 |
| %Difference | - 9.4% | $ - 5.7% | - 12.2% | - 11.5% | - 4.4% | - 9.5% | - 12.1% | - 10.5% |

## 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT



## 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.5: Comparative Total Building Costs 1980 - 1983*

| Year | Average 8 Centers | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton** | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|---|
| 1980 | $709,337 | $660,295 | $670,183 | $685,282 | $811,898 | $736,435 | - | $703,808 | $697,459 |
| 1981 | $756,703 | $714,492 | $719,003 | $733,211 | $861,728 | $784,409 | - | $740,084 | $743,992 |
| 1982 | $712,232 | $665,273 | $627,844 | $710,485 | $805,134 | $700,436 | $744,686 | $720,280 | $723,716 |
| 1983 | $644,459 | $603,046 | $592,174 | $623,852 | $712,262 | $669,574 | $674,046 | 632,872 | $647,845 |

NOTES: * Expressed in nominal dollars.
**Hinton was not included in the 1980 and 1981 studies.

## 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.6: Comparative Cost per Square Foot of Gross Floor Area*

| Year | Average 8 Centers | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton** | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|---|
| 1980 | $ 35.48 | $ 33.04 | $ 33.52 | $ 34.28 | $ 40.61 | $ 36.84 | - | $ 35.20 | $ 34.89 |
| 1981 | $ 37.86 | $ 35.75 | $ 35.97 | $ 36.68 | $ 43.11 | $ 39.24 | - | $ 37.03 | $ 37.22 |
| 1982 | $ 35.63 | $ 33.28 | $ 31.41 | $ 35.54 | $ 40.28 | $ 35.04 | $ 37.26 | $ 36.03 | $ 36.21 |
| 1983 | $ 32.24 | $ 30.17 | $ 29.63 | $ 31.21 | $ 35.63 | $ 33.50 | $ 33.72 | $ 31.66 | $ 32.41 |

NOTES: * Expressed in nominal dollars.
**Hinton was not included in the 1980 and 1981 studies.

## 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

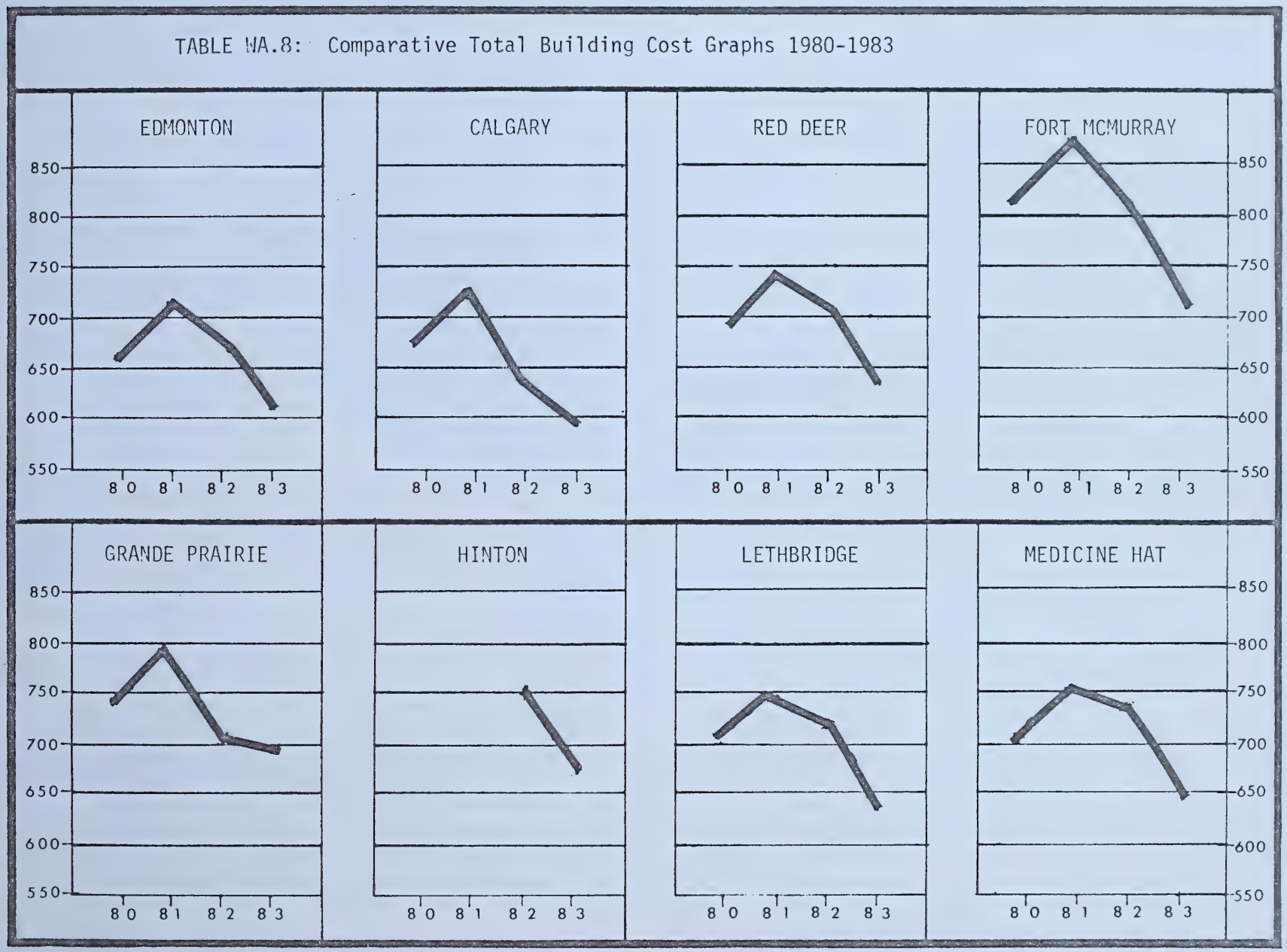
TABLE WA.7: Comparative Cost per Apartment Unit*

| Year | Average 8 Centers | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton** | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|---|
| 1980 | $29,555 | $ 27,512 | $ 27,924 | $ 28,553 | $ 33,829 | $ 30,684 | - | $ 29,325 | $ 29,061 |
| 1981 | $31,529 | $ 29,771 | $ 29,958 | $ 30,550 | $ 35,905 | $ 32,684 | - | $ 30,837 | $ 31,000 |
| 1982 | $29,677 | $ 27,720 | $ 26,160 | $ 29,604 | $ 33,547 | $ 29,185 | $ 31,029 | $ 30,012 | $ 30,155 |
| 1983 | $26,853 | $ 25,127 | $ 24,674 | $ 25,994 | $ 29,678 | $ 27,899 | $ 28,085 | $ 26,370 | $ 26,994 |

NOTES: * Expressed in nominal dollars.
** Hinton was not included in the 1980 and 1981 studies.

## 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.8: Comparative Total Building Cost Graphs 1980-1983



## 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.9: Trade Division Cost Summaries

| Location | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|
| Divisions | | | | | | | | |
| 1. Excavation | 2,571 | 2,857 | 2,869 | 3,802 | 3,171 | 2,805 | 3,382 | 2,996 |
| 2. Concrete | 15,170 | 14,729 | 16,914 | 21,440 | 19,259 | 17,071 | 16,188 | 17,753 |
| 3. Damproofing | 611 | 601 | 796 | 850 | 853 | 651 | 730 | 730 |
| 4. Siding | 12,876 | 12,534 | 12,782 | 17,122 | 16,589 | 16,806 | 15,549 | 15,833 |
| 5. Roofing | 23,589 | 25,556 | 27,778 | 34,418 | 28,743 | 28,379 | 25,722 | 25,751 |
| 6. Carpentry - Rough | 89,806 | 91,380 | 85,235 | 111,972 | 96,020 | 95,505 | 97,113 | 104,140 |
| 7. Carpentry - Finish | 6,554 | 6,784 | 6,422 | 7,048 | 6,590 | 6,712 | 6,720 | 6,952 |
| 8. Windows and Glazing | 20,796 | 19,716 | 21,941 | 25,786 | 22,510 | 22,265 | 22,301 | 22,301 |
| 9. Sealants | 762 | 762 | 762 | 762 | 762 | 762 | 762 | 762 |
| 10. Doors | 24,234 | 23,111 | 24,312 | 26,280 | 26,995 | 26,526 | 25,771 | 24,536 |
| 11. Hardware | 2,923 | 2,923 | 2,923 | 2,970 | 2,970 | 2,970 | 2,947 | 2,947 |
| 12. Ceramic Tiling | 4,110 | 3,699 | 4,151 | 4,521 | 3,781 | 5,480 | 4,247 | 4,384 |
| SUB TOTAL | 204,002 | 204,652 | 206,885 | 256,971 | 228,243 | 225,932 | 221,432 | 229,085 |

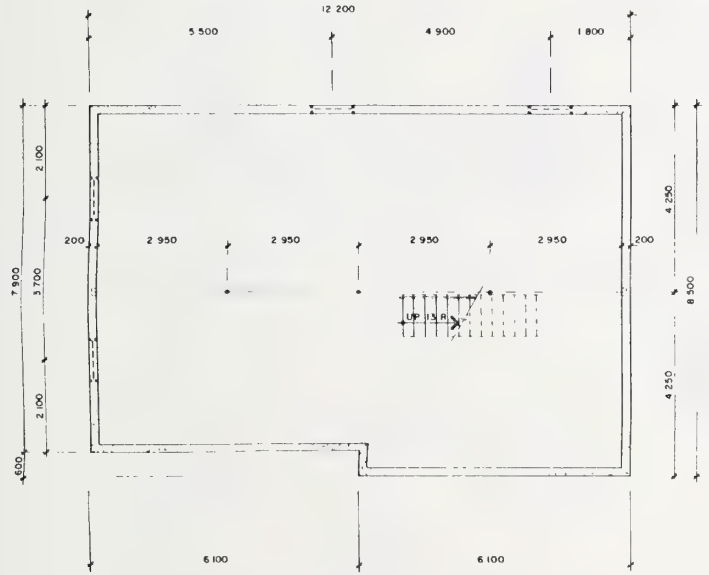
## 3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.9: Trade Division Cost Summaries (cont'd)

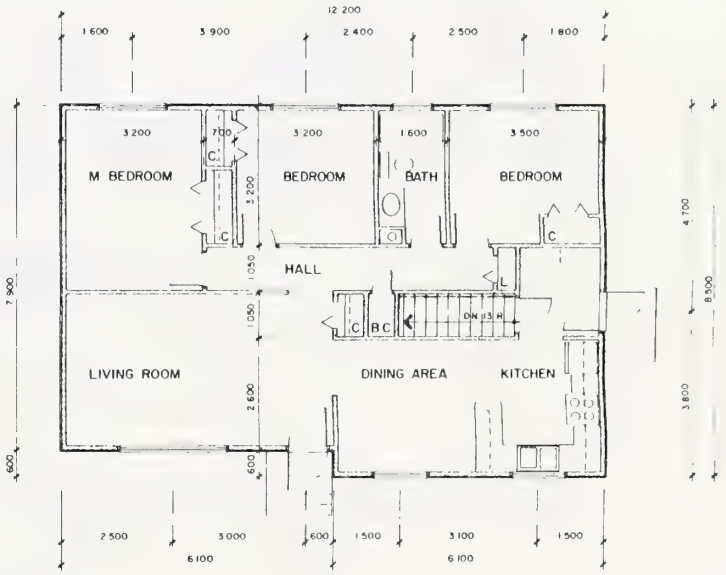
| Location | Edmonton | Calgary | Red Deer | Fort McMurray | Grande Prairie | Hinton | Lethbridge | Medicine Hat |
|---|---|---|---|---|---|---|---|---|
| Divisions | | | | | | | | |
| 13. Wallboard | 45,492 | 43,598 | 47,213 | 58,293 | 53,672 | 51,631 | 48,491 | 50,079 |
| 14. Flooring | 43,721 | 41,865 | 46,930 | 50,760 | 46,186 | 47,107 | 48,328 | 48,516 |
| 15. Painting | 18,285 | 17,145 | 20,125 | 21,837 | 20,461 | 21,964 | 21,608 | 22,306 |
| 16. Fittings | 37,624 | 34,952 | 38,853 | 40,841 | 39,876 | 39,724 | 39,629 | 39,627 |
| 17. Specialties | 15,698 | 15,698 | 15,842 | 15,720 | 15,720 | 15,720 | 15,712 | 15,712 |
| 18. Appliances | 26,832 | 26,832 | 27,528 | 28,224 | 28,200 | 27,864 | 27,528 | 27,528 |
| 19. Plumbing | 58,896 | 54,576 | 57,960 | 63,360 | 60,960 | 65,688 | 54,960 | 54,960 |
| 20. Heating | 30,600 | 30,936 | 31,440 | 40,200 | 40,200 | 40,200 | 31,560 | 32,760 |
| 21. Ventilation | 7,032 | 7,104 | 7,080 | 9,000 | 9,000 | 9,000 | 8,280 | 8,280 |
| 22. Fire Protection | 2,064 | 2,016 | 2,076 | 2,616 | 2,616 | 2,616 | 2,064 | 2,064 |
| 23. Electrical | 40,800 | 40,800 | 49,920 | 52,440 | 52,440 | 54,600 | 41,280 | 44,928 |
| 24. Site Overhead | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 |
| SUBTOTALS - 1-24 | 579,046 | 568,174 | 599,852 | 688,262 | 645,574 | 650,046 | 608,872 | 623,845 |
| 25. Gnrl Cntrctr's Overh. & Profit | 24,000 | 24,000 | 24,000 | 24,000 | 24,000 | 24,000 | 24,000 | 24,000 |
| TOTAL | 603,046 | 592,174 | 623,852 | 712,262 | 669,574 | 674,046 | 632,872 | 647,845 |

# APPENDIX 'A'

Reduced Drawings Single-Detached Dwelling




BASEMENT / FOUNDATION PLAN



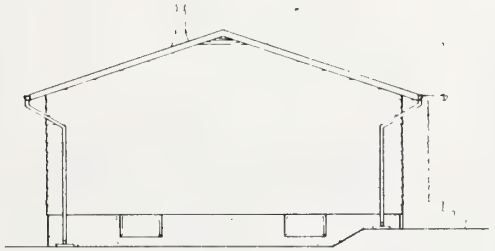

GROUND FLOOR PLAN

## *ALBERTA HOUSE COST COMPARISON STUDY*

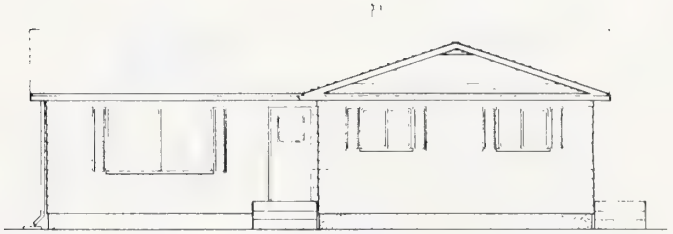
FLOOR PLANS

SCALE 1 50

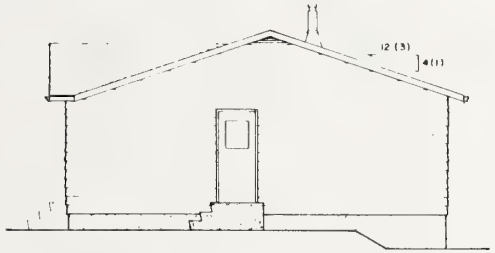




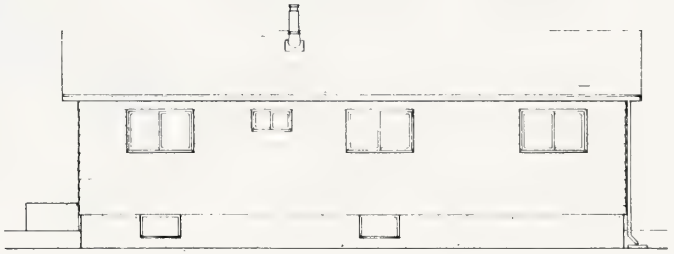
LEFT ELEVATION



FRONT ELEVATION




RIGHT ELEVATION



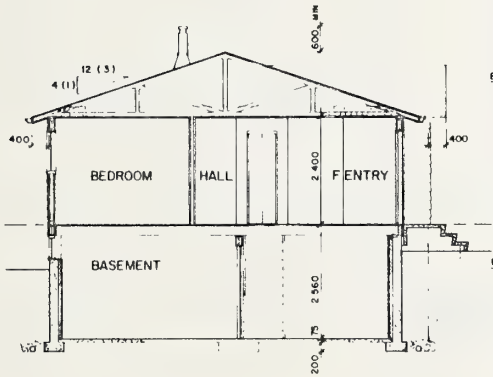
REAR ELEVATION

## *ALBERTA HOUSE COST COMPARISON STUDY*

ELEVATIONS

SCALE 1 50






SECTION A

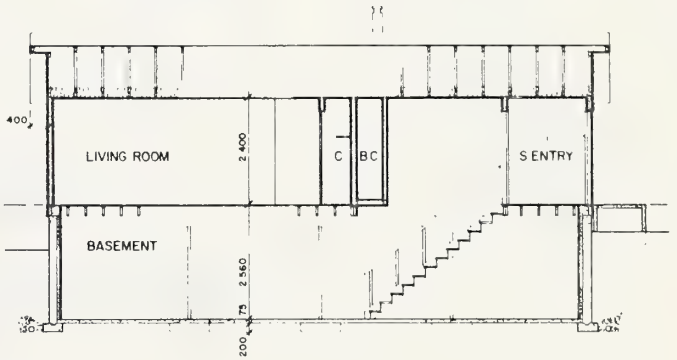
**EXTERIOR WALLS**
PREFINISHED ALUMINUM SIDING
ASPHALT FELT BUILDING PAPER
8 mm EXT GRADE PLYWOOD SHEATHING
38 x 89 WOOD STUDS AT 400 mm O C
No 2 GR SPRUCE OR BETTER
R 3.1 - 2 113 BATT INSULATION
102 mm POLY VAPOUR BARRIER
13 mm GYPSUM BD TAPED & SANDED

**BASEMENT WALLS**
2 COATS ASPHALTIC EMULSION DAMPROOFING
200 mm - 17 236 9 kPA POURED CONC. REINFORCED
38 x 38 WOOD STRAPPING AT 400 mm O C
R 3.1 - 1 057 BATT INSULATION
102 mm POLY VAPOUR BARRIER
13 mm GYPSUM BD TAPED & SANDED
200 x 450 - 17 236 9 kPA CONT. POURED CONC FOOTING, REINFORCED
100 mm DIAMETER PERFORATED PLASTIC WEEPING PIPE
300 mm MIN CRUSHED GRAVEL COVER

**FLOORS**
GROUND - 8 mm PLYWOOD SHEATHING SUB FLOOR
16 mm PLYWOOD SHEATHING SUB FLOOR UNDERLAY
38 x 235 FLOOR JOISTS AT 400 mm O C
No 2 GR FIR OR BETTER
3 - 38 x 235 BUILT UP BEAM
No 2 GR FIR OR BETTER
3 - 64 mm DIAMETER TELEPOSTS
BASEMENT - 75 mm - 17 236 9 kPA POURED CONC SLAB ON GRADE
152 mm POLY VAPOUR BARRIER
150 mm SAND OR GRAVEL BED

**ROOF VENTILATION**
UNOBSTRUCTED VENT AREA OF NOT LESS THAN 1/300 OF THE INSULATED CEILING AREA

**ATTIC ACCESS**
500 x 700 CEILING PANEL




SECTION B

**ROOF**
ASPHALT SHINGLES
10 mm EXT GRADE PLYWOOD SHEATHING
APPROVED TRUSSES AT 600 mm O C
38 x 89 No 2 GR FIR OR BETTER
R 9.1 - 5 987 BLOWN CELLULFIBRE INSULATION TO ATTIC
102 mm POLY VAPOUR BARRIER
13 mm GYPSUM BD CEILING
FASCIA - 25 x 150 SPRUCE BD PREFINISHED ALUMINUM
SOFFIT - PREFINISHED ALUMINUM PERFORATED
EAVESTROUGH - PREFINISHED ALUMINUM GA 576 mm WITH FITTINGS
DOWNSPOUT - PREFINISHED ALUMINUM GA 376 mm CORRUGATED RECTANGULAR WITH FITTINGS
FLASHINGS - GALVANIZED STEEL GA 457 mm AT EAVES, VALLEYS, VENTS, ETC

**STAIRS**
FRONT STEPS - PRECAST CONCRETE WITH SUPPORTING BRACKETS 1 500 x 1 500 x 600 - 5 RISERS
SIDE STEPS - PRECAST CONCRETE WITH SUPPORTING BRACKETS 1 200 x 1 675 x 600 - 5 RISERS
BASEMENT - 38 x 235 STRINGERS
38 x 235 TREADS
8 4 mm PLYWOOD RISERS
50 mm DIAMETER PIN HANDRAIL WITH BRACKETS

## *ALBERTA HOUSE COST COMPARISON STUDY*

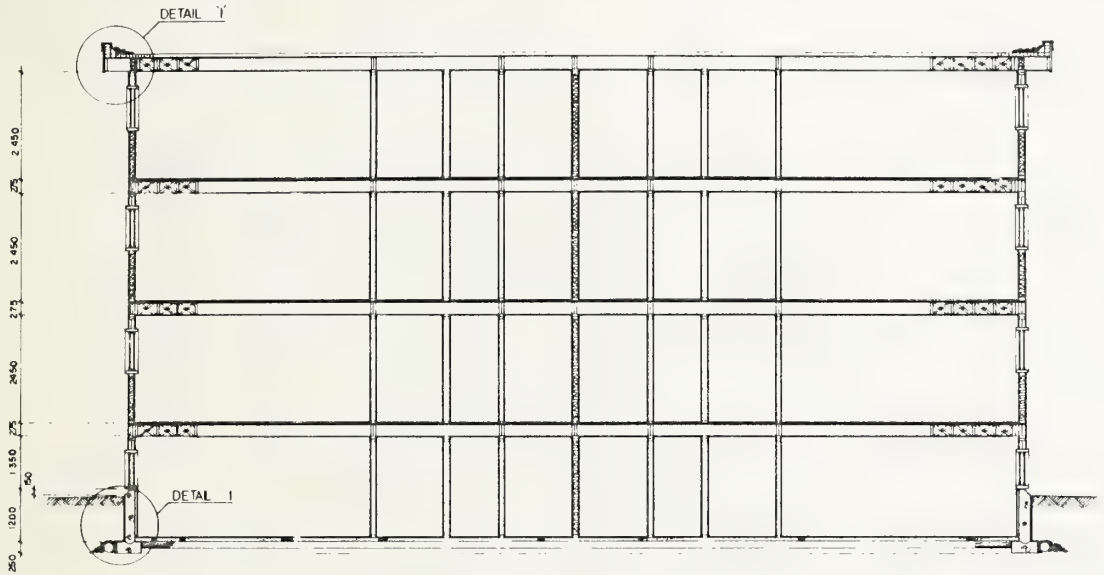
SECTIONS

SCALE 1 : 50

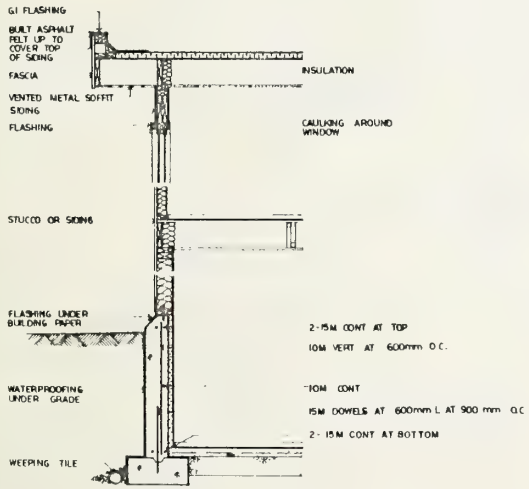


# APPENDIX 'B'

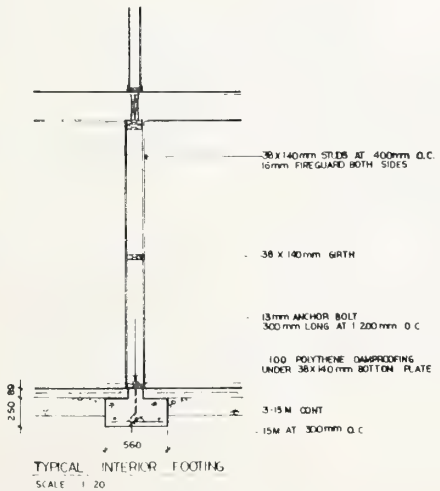
Reduced Drawings Walk-up Apartment




SECTION
SCALE 1:50




DETAIL 'A'
SCALE 1:20




TYPICAL INTERIOR FOOTING
SCALE 1:20

**Roof Construction: Built-up Roof**

- 50mm rigid insulation
- 10 mm plywood sheathing
- 38 x 184mm rafters/joists @ 400mm on centre
- 38 x 184mm cross bridging
- 13mm fire guard with sound bar and Tentest

**Floor Construction**

- 38 x 235-mm No. 1 fir or spruce
- 18mm sub floor
- 8mm underlay
- floor finish
- 13mm Tentest U/S of joists
- sound bars
- 13mm fire guard

**Basement Floor Construction**

- 80mm concrete floor slab
- 6/6 mesh
- vapour barrier
- 150mm compacted gravel fill

**Exterior Wall Construction**

- siding or stucco
- building paper
- 8mm plywood sheathing
- mineral wool insulation
- 38 x 89mm wood studs @ 400mm on centre
  (38 x 140mm wood studs for basement floor)
- 13mm gypsum board

**Corridor and Demising Wall Construction**

- 38 x 89mm wood studs @ 400mm on centre staggered
- mineral wool
- 6mm sound board
- 13mm fire guard both sides

**Bearing Wall Construction**

- 38 x 140mm wood studs @ 400mm on centre
- 16mm fire guard both sides for all interior bearing walls

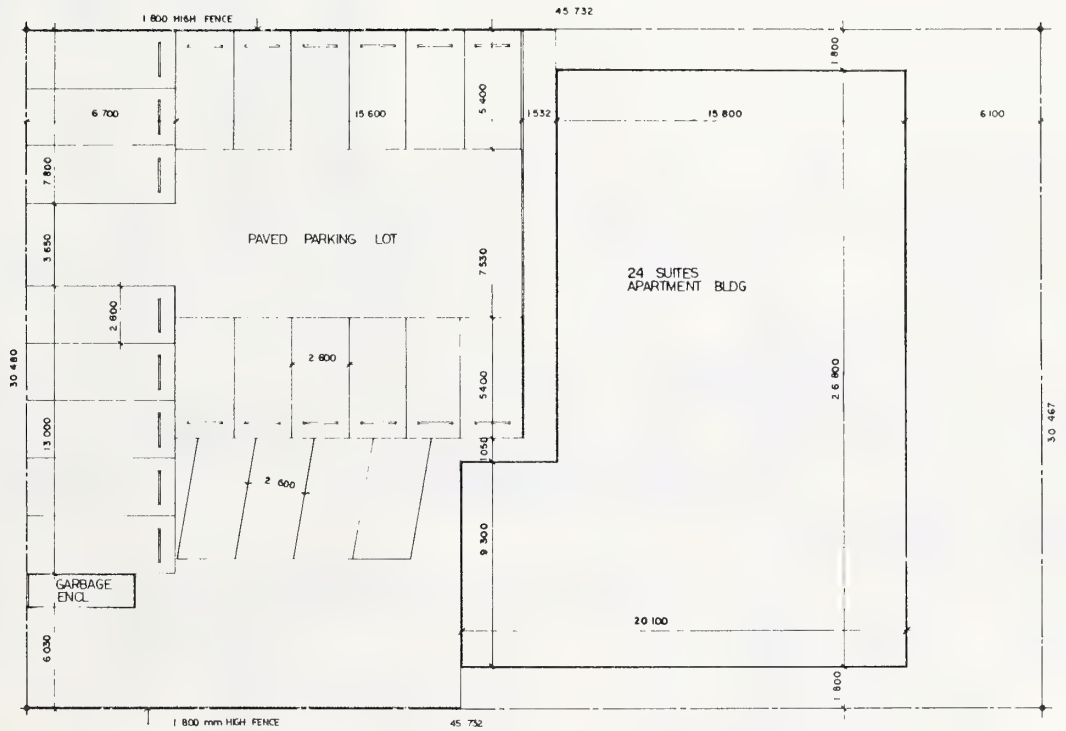
**Ceiling Construction**

- 16mm fire guard

# *ALBERTA HOUSE COST COMPARISON STUDY*

SECTION & DETAILS

SCALES - AS SHOWN




STATISTICS

SITE AREA 1194 m²

SUITES
24 One Bedroom 1338m²

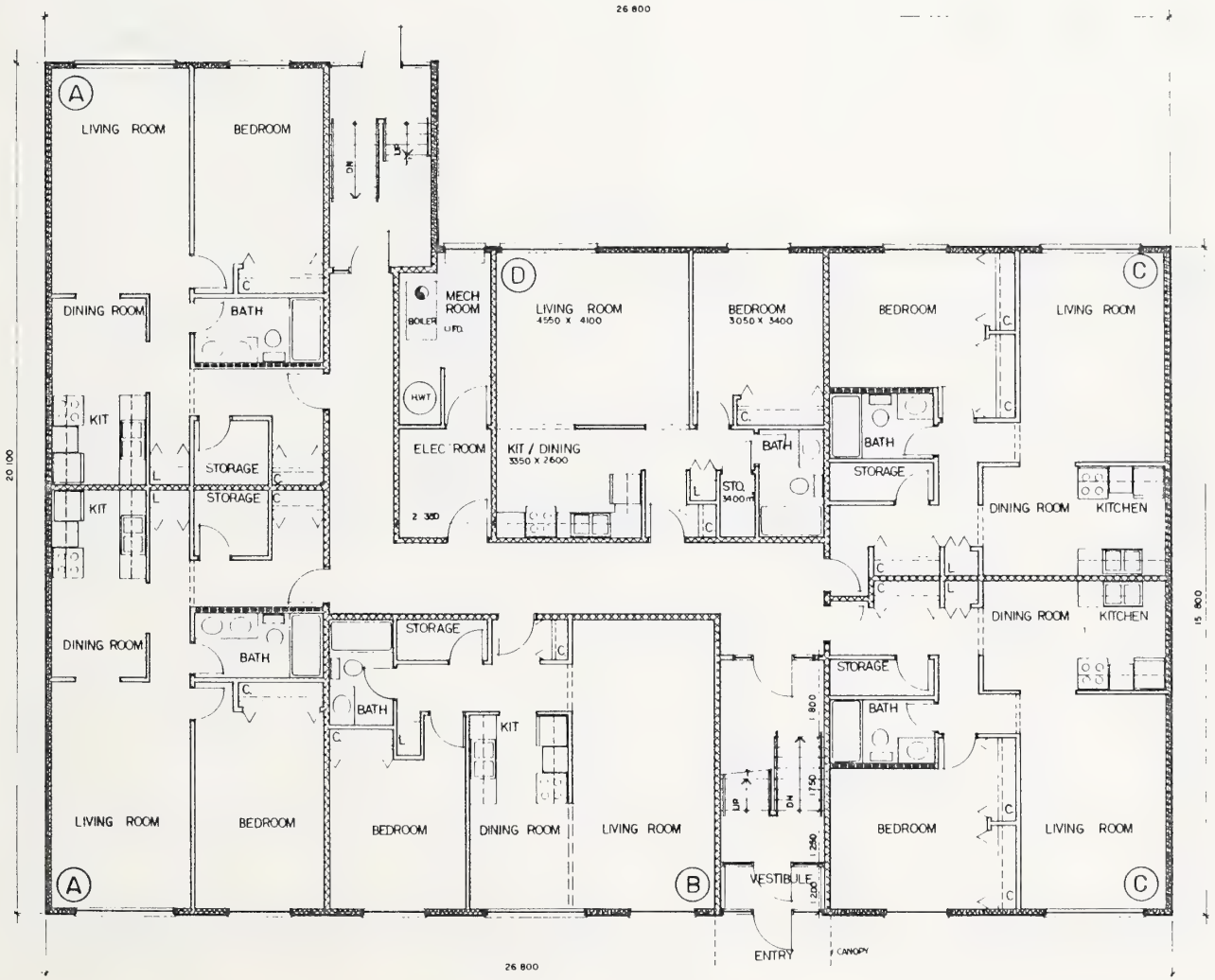
PARKING 24 cars

## ALBERTA HOUSE COST COMPARISON STUDY

SITE PLAN

SCALE 1:100

0 1 2 3 4 5 6 7 8 9 10M

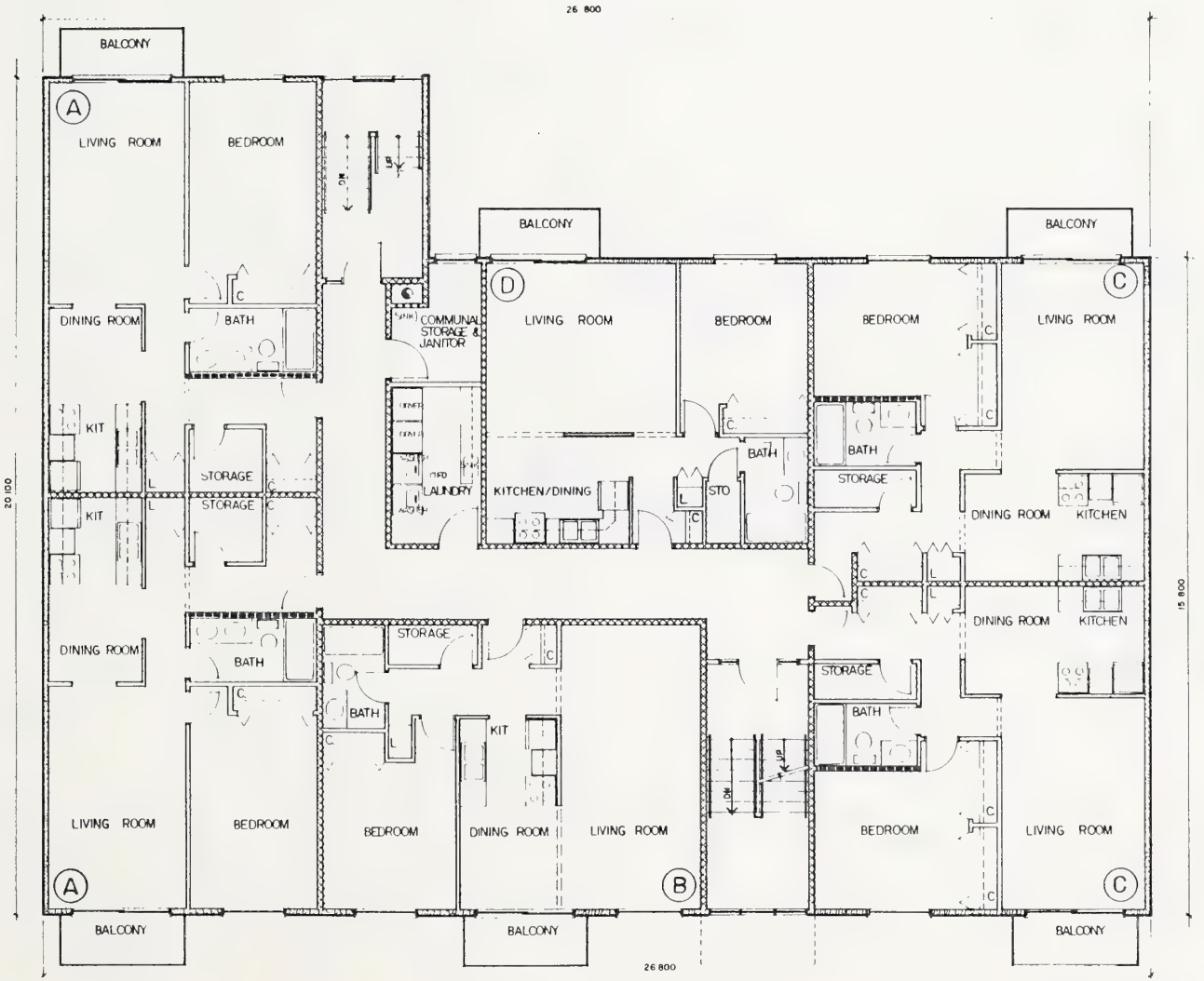



## ALBERTA HOUSE COST COMPARISON STUDY

BASEMENT FLOOR PLAN

SCALE 1:50

0 .5 1 2 3 4 5 6M

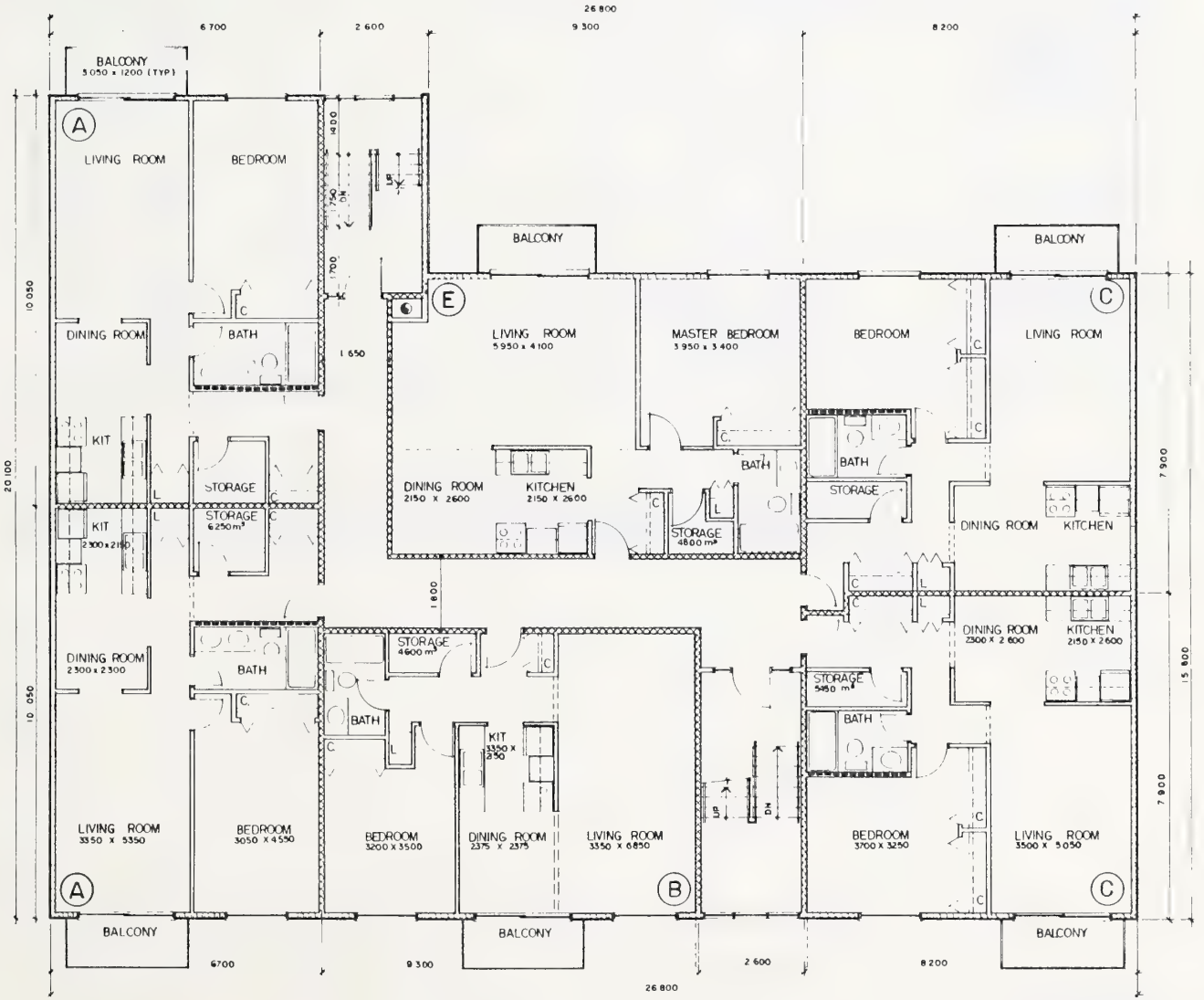



**ALBERTA HOUSE COST COMPARISON STUDY**

MAIN FLOOR PLAN

SCALE 1:50

0 .5 1 2 3 4 5 6M

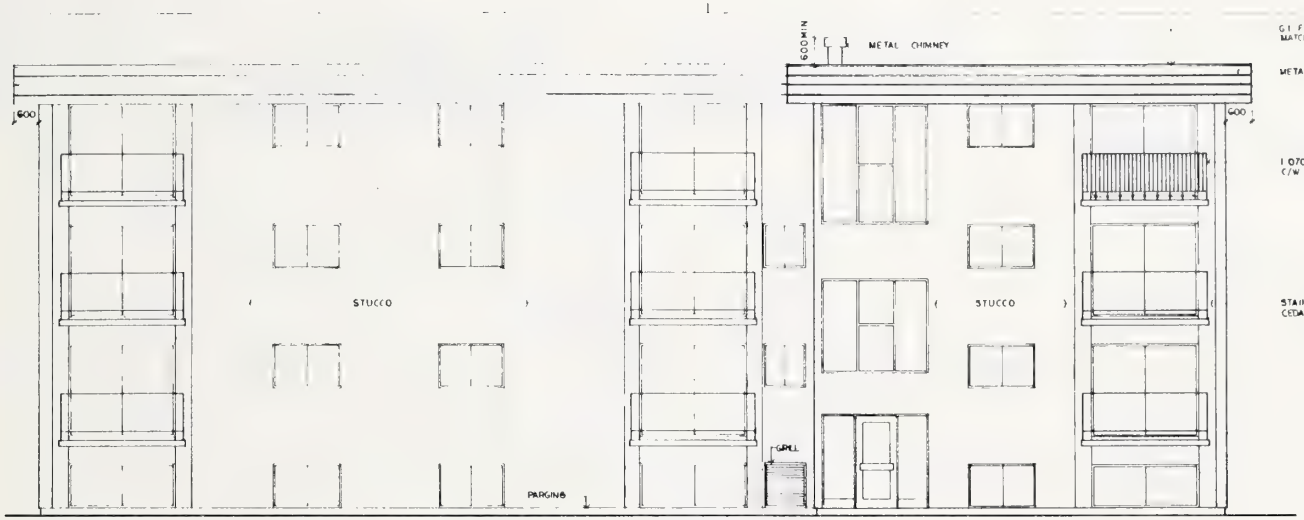



## ALBERTA HOUSE COST COMPARISON STUDY

2ND & 3RD FLOOR PLAN

SCALE 1:50

0 5 1 2 3 4 5 6M




REAR ELEVATION



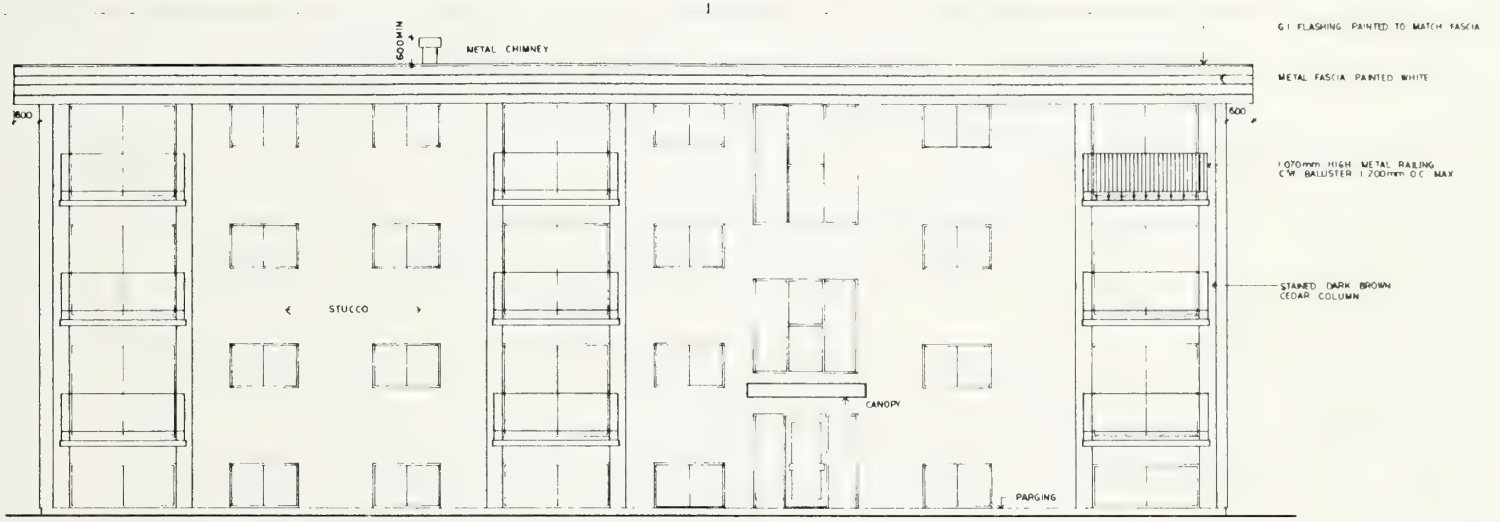

LEFT ELEVATION

## *ALBERTA HOUSE COST COMPARISON STUDY*

ELEVATIONS

SCALE 1:50






FRONT ELEVATION




RIGHT ELEVATION

## ALBERTA HOUSE COST COMPARISON STUDY

ELEVATIONS

SCALE 1:50

0 .5 1 2 3 4 5 6M

# APPENDIX 'C'

## Changes from 1982 Study

SINGLE DETACHED DWELLING

This appendix notes changes made in the 1983 study as a result of updating, non-availability of materials or changes in standard materials used by the majority of home builders.

| No. | Trade Div. | Item* No.(s) | Description |
|---|---|---|---|
| 1 | Concrete | 2.40 | Concrete 20.0 MPA in lieu of 17.5 MPA |
| 2 | Rough Carpentry | 6.50<br>13.80 | Batt insulation RSI 1.409 (R8) in lieu of RSI 1.057 (R6) |
| 3 | Windows and Glazing | 8.10 thru 8.50 | Windows and Glazing:<br>Wood framed window with vinyl sliders in lieu of aluminium framed sliding units |
| 4 | Flooring | 14.20 | Carpet 20 oz. 100% nylon with 6mm (1/4") underlay in lieu of 70/30 Acrylic/Nylon |
| 5 | Appliances | 18.10<br>18.20 | Appliances:<br>Same as 1982 but shown as an allowance - same cost for all eight centers |
| 6 | Electrical | 21.10 | Electrical - Lighting Fixture Material:<br>Same as 1982 but shown as an allowance - same cost for all eight centers |
| 7 | Site Overhead | 22.10 | Site Overhead:<br>Same as 1982 but shown as an allowance - same cost for all eight centers (see Trade Division Costs) |

NOTES: *These item numbers refer to the detailed cost estimates in the trade divisions. See Section 4.0 in the report on the single-detached dwelling.

WALK-UP APARTMENT

This appendix notes changes made in the 1983 study, as a result of updating, non-availability of materials or changes in standard materials used by the majority of home builders.

| No. | Trade Div. | Item * No. (s) | Description |
|---|---|---|---|
| 1 | Concrete | 2.40 | 20.0 MPA concrete in lieu of 17.5 MPA |
| 2 | Windows and glazing | 8.30<br>8.50 | Windows:<br>Wood frame with aluminium sliders in lieu of baked enamel frame |
| 3 | Doors | 10.30 | Metal folding bi-fold doors in lieu of mahogany faced |
| 4 | Flooring | 14.20 | Carpet: Weight of 20 oz. specified in the description for clarification |
| 5 | Appliances | 18.20 | Specified manual defrost to the refrigerator description |
| 6 | Electrical | 23.10 | New section added, which includes a $200 allowance for electrical fixtures |
| 7 | Site Overhead | 24.00 | Site Overhead - new division added (same amounts for all centres) |
| 8 | Overhead and Profit | 25.00 | Overhead and Profit - General Contractor's office overhead and profit - new division added (same amounts used for all centres) |

NOTES: *These item numbers refer to the detailed cost estimates in the trade divisions. See Section 4.0 of the report on the walk-up apartment.